

ABSTRACT

Michael Djurijanto (01034170041)

UTILIZATION OF MEALWORMS (*TENEBRIO MOLITOR* L.) AND YOUNG JACKFRUIT FLESH (*ARTOCARPUS HETEROPHYLLUS* L.) AS CHICKEN-ANALOGUE FRIED PATTIES ADDED WITH ARTIFICIAL CHICKEN FLAVOR

Thesis, Faculty of Science and Technology (2021).

(xv + 61 pages; 26 tables; 18 figures; 10 appendices)

Jackfruit, specifically in their young stage, is a popular fruit that grows in tropical countries which require minimal processing and is usually made into various dishes. The texture of young jackfruit flesh is described as meat-like and has a mild flavor. Edible insects such as mealworms (*Tenebrio molitor* L.) are possible sources of protein. Combination of both young jackfruit flesh and mealworm may be utilized as an alternative source for protein. A popular protein source is livestock, specifically chickens. A widely known way of processing chickens is by frying them. However, the increasing global population and demand towards livestock pose a threat to food security. Therefore, meat analogue with similar protein content and organoleptic characteristics may be a future alternative for protein source. However, the ratio of young jackfruit flesh to mealworm powder and the concentration of artificial chicken flavor must be determined to obtain not only nutritious meat analogue, but also desirable in terms of its organoleptic properties. The general objective of this research was to utilize young jackfruit flesh and mealworms along with artificial chicken flavoring as ingredients to produce chicken-analogue fried patties. This research was performed in 2 preliminary steps and 2 main stages. The preliminary stages involved mealworm powder and boiled young jackfruit flesh preparation. Main research stage I analyzed the effect of different ratio of young jackfruit flesh to mealworm powder (90:10, 80:20, and 70:30) on the physicochemical properties of chicken-analogue fried patties with two replications. Research stage II analyzed the effect of different artificial chicken flavor concentrations (0, 0.5, and 1%) on the organoleptic properties of the selected chicken-analogue fried patties formulation. The selected chicken-analogue fried patties formulation was made with ratio of young jackfruit flesh 70:30 mealworm powder with addition of 0.5% artificial chicken flavor. The selected formulation contained 38.43% protein and experienced 12.59% cooking loss. To conclude, the selected chicken-analogue fried patties formulation in this research can be a future alternative to fried chicken.

Keywords : Young jackfruit flesh, mealworms, chicken-analogue fried patties, meat analogue

Reference : 49 (2003-2020)